IBM WebSphere sMash Version 1.1

Highlights

- *Accelerates the alignment of business and IT by allowing developers to quickly and simply build agile Web-based applications that respond to business opportunities*

- *Enables rapid aggregation of disparate services, feeds and application functions*

- *Allows users to easily reuse content and services*

- *Provides easily deliverable solutions for midmarket and department-level needs*

- *Extends the reach of service oriented architecture (SOA) to the Web*

Introduction

As services become more available on the Web and lightweight Web 2.0 technologies proliferate, businesses are increasingly turning to rich, interactive Web-oriented applications that target immediate situational needs.

Enterprise departments and midmarket companies are seeking faster time to value to close what is commonly known as the IT delivery gap—the time between the identification of a problem or opportunity and when the solution is delivered.

IBM WebSphere® sMash provides a new development and execution environment that enables agile development of dynamic Web applications. WebSphere sMash gives developers the power to rapidly create, assemble and run situational composite applications. It uses dynamic scripting, lightweight application assembly and representational state transfer (REST) style service invocation.

By allowing developers to quickly and easily deliver dynamic Web 2.0-based applications, WebSphere sMash can help extend the reach of service-oriented architecture (SOA), rapidly improve the alignment of business and IT, and deliver fast time to value.

IBM WebSphere sMash is based on Project Zero, an online development community at http://www.projectzero.org that represents the people who build and use WebSphere sMash and its future releases. The result is a dynamic solution, shaped by users, that improves developer productivity and efficiency in delivering business applications that are agile, simple and fast.

Reduce development time with an easy-to-learn and cost-effective platform
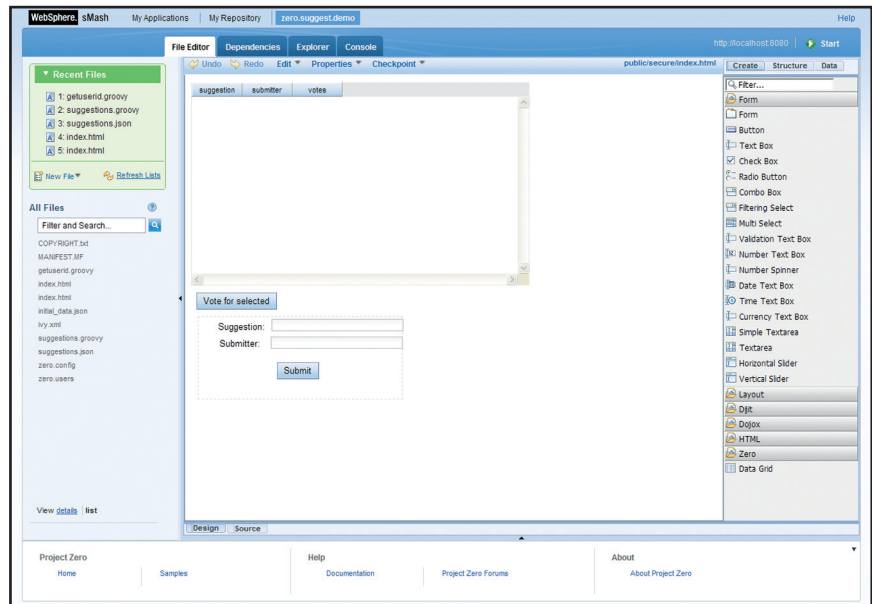
The popularity of lightweight Web 2.0 technologies on the Internet is changing the type of programming that developers perform: they are

shifting from service creation to application assembly. A REST approach to SOA is emerging, providing unparalleled access to data and resources. This is important because customers have data and services tied up in their existing applications and data sources. They need to expose this data and function in formats such as Atom, JavaScript™ object notation (JSON), Really Simple Syndication (RSS), and REST interfaces that can be more easily integrated into modern Web applications.

These modern Web applications must also tie in business processes and enable collaboration. Building such Web integration applications requires reusable building blocks and tooling to speed time to value.

Businesses also continue to expand their ecosystems and partnerships. These partnerships cause integration work items for IT, typically requiring a minimum of six months per request. A number of these business collaborations last less than 12 months, meaning that they require much shorter development cycles. Many of these situational applications are not being written today because they're simply not affordable or timely enough.

WebSphere sMash software is designed to improve developer productivity and efficiency through the support of dynamic scripting languages.

Screenshot of the Web-based visual Page Editing tool in WebSphere sMash, which features drag and drop design, automatic HTML source generation, Dojo widgets, and CSS property editing and data binding.

These scripting languages are easy to learn, have a large number of reusable assets, and allow developers to focus on business logic instead of low-level functions when they need to write code.

Users benefits from IBM WebSphere sMash software

WebSphere sMash can provide numerous benefits for today's midmarket organizations and departments, including:

- *Improved developer productivity and efficiency*
- *Simplified deployment of applications*
- *Increased customer satisfaction and line of business (LOB) productivity by streamlining end-user interaction with Web-based applications*
- *Access to a growing online development community of users and the WebSphere sMash development team*

Product features

Let's take a closer look at the product features of IBM WebSphere sMash.

Improved developer productivity and efficiency

IBM WebSphere sMash contains a scripting runtime environment for Groovy and PHP. This gives IBM Business Partners and clients access to programmers from the large and growing PHP development community. By combining PHP with a Groovy and Java-based runtime environment, developers can compose applications and services that draw upon assets from both the Java and PHP communities. Business Partners and clients can use the best of both worlds.

WebSphere sMash also features easy-to-build RESTful applications. Application programming interfaces are optimized for producing REST-style services, integration mashups and rich Web interfaces.

Simplified deployment of applications

The lightweight foundation of WebSphere sMash is based on a "run and done" model in which the application acts as the server. WebSphere sMash allows developers to rapidly create and assemble services, data sources, and application functions, and deploy with greater agility.

Another feature of this solution is its application programming interface (API) for connections. This interface allows applications to connect to other resources through a number of protocols, including HTTP or HTTPS, Java™ Message Service (JMS) and file and e-mail (SMTP).

Increased customer satisfaction and line-of-business productivity by streamlining user interaction with Web-based applications

WebSphere sMash supports Web 2.0 architectures and protocols including REST and Atom for the service invocation model, JSON and XML for the data interchange format, and Asynchronous JavaScript and XML (AJAX) for the rich client model.

This solution also features a supported AJAX development toolkit (Dojo Toolkit) for enablement of rich user experiences without requiring additional browser plug-ins. WebSphere sMash provides a visual editor for user interface (UI) design in which you can drag and drop Dojo artifacts.

Data access is provided through a layer of abstraction between the actual data store and REST. Inline structured query language (SQL) capabilities come directly from scripts, allowing straight SQL while simplifying common query patterns.

And when it comes to security, WebSphere sMash has capabilities for authentication and for authorization by users, groups and roles, as well as support for OpenID. Active Content Filtering (ACF) allows for validation of inbound request parameters—in addi- tion to inbound and outbound JSON messages—to detect and remove malicious active content such as JavaScript.

Access to a growing online development community

A focal point for WebSphere sMash development activity is www.projectzero.org, providing access to a community of users and the WebSphere sMash development team. Developers can use this site to:

- *Interact directly with the WebSphere sMash development team*
- *Download the latest builds*
- *View and submit bugs*
- *Access source code*
- *Read documentation*
- *Access the latest browser-based tooling for WebSphere sMash*

Reliable Transport Extension

The IBM Reliable Transport Extension for WebSphere sMash can provide additional capability for WebSphere sMash Version 1.1 applications to interact, using an asynchronous, reliable transport based on queues. Key capabilities of the Reliable Transport Extension include:

- *A lightweight, built-in reliable messaging engine*
- *Additional capabilities for the connection API to allow applications to send messages to the messaging engine*
- *Registration of WebSphere sMash V1.1 applications as handlers for incoming message requests, similar to HTTP request handling*
- *Storing and forwarding of queues between multiple messaging engines*
- *Secure connections to, from and between messaging engines*
- *A client that allows Java applications outside WebSphere sMash Version 1.1 to reliably send messages to and receive messages from WebSphere sMash Version 1.1*

Availability

WebSphere sMash can be purchased from **ibm.com** or any IBM Business Partner. For developers, WebSphere sMash Developers Edition is available for free download and limited deployment. WebSphere sMash licenses must be purchased when deploying it into production. Developers Edition represents the stable version of WebSphere sMash plus browser-based tooling and an Eclipse plug-in, while the latest iterations of the tooling are available on www.projectzero.org. WebSphere sMash Developers Edition is not available for commercial redistribution by IBM Business Partners.

For more information

For more information about IBM WebSphere sMash, or to get your complimentary download of WebSphere sMash Developers Edition, go to: **ibm.com**/software/webservers/smash

For more information about Project Zero, go to: www.projectzero.org

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